METHIMAZOLE- methimazole tablet
NCS HealthCare of KY, Inc dba Vangard Labs

Methimazole Tablets

DESCRIPTION

Methimazole Tablets USP (1- methylimidazole-2-thiol) is a white, crystalline substance that is freely soluble in water.

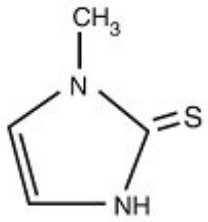
It differs chemically from the drugs of the thiouracil series primarily because it has a 5- instead of a 6-membered ring.

Each tablet contains 5 or 10 mg (43.8 or 87.6 µmol) methimazole, an orally administered antithyroid drug.

Each tablet also contains lactose monohydrate, NF, colloidal silicon dioxide, NF, talc, USP, pregelatinized starch, NF,

anhydrous lactose, NF, and magnesium stearate, NF. The molecular weight is 114.16, and the molecular formula

is C4H6N2S. The structural formula is as follows:



CLINICAL PHARMACOLOGY

Methimazole inhibits the synthesis of thyroid hormones and thus is effective in the treatment of hyperthyroidism.

The drug does not inactivate existing thyroxine and triiodothyronine that are stored in the thyroid or circulating in

the blood nor does it interfere with the effectiveness of thyroid hormones given by mouth or by injection.

The actions and use of methimazole are similar to those of propylthiouracil. On a weight basis, the drug is at least 10

times as potent as propylthiouracil, but methimazole may be less consistent in action. Methimazole is readily

absorbed from the gastrointestinal tract. It is metabolized rapidly and requires frequent administration. Methimazole is

excreted in the urine. In laboratory animals, various regimens that continuously suppress thyroid function and

thereby increase TSH secretion result in thyroid tissue hypertrophy. Under such conditions, the appearance of thyroid

and pituitary neoplasms has also been reported. Regimens that have been studied in this regard include

antithyroid agents as well as dietary iodine deficiency, subtotal thyroidectomy, implantation of autonomous

thyrotropic hormone-secreting pituitary tumors, and administration of chemical goitrogens.

INDICATIONS AND USAGE

Methimazole is indicated in the medical treatment of hyperthyroidism. Long-term therapy may lead to remission of the

disease. Methimazole may be used to ameliorate hyperthyroidism in preparation for subtotal thyroidectomy or

radioactive iodine therapy. Methimazole is also used when thyroidectomy is contraindicated or not advisable.

CONTRAINDICATIONS

Methimazole is contraindicated in the presence of hypersensitivity to the drug and in nursing mothers because the

drug is excreted in milk.

WARNINGS

Agranulocytosis is potentially a serious side effect. Patients should be instructed to report to their physicians any symptoms

of agranulocytosis, such as fever or sore throat. Leukopenia, thrombocytopenia, and aplastic anemia (pancytopenia) may also occur.

The drug should be discontinued in the presence of agranulocytosis, aplastic anemia (pancytopenia), hepatitis, or exfoliative dermatitis.

The patient"s bone marrow function should be monitored. Due to the similar hepatic toxicity profiles of methimazole

and propylthiouracil, attention is drawn to the severe hepatic reactions which have occurred with both drugs. There have

been rare reports of fulminant hepatitis, hepatic necrosis, encephalopathy, and death. Symptoms suggestive of

hepatic dysfunction (anorexia, pruritus, right upper quadrant pain, etc) should prompt evaluation of liver function. Drug

treatment should be discontinued promptly in the event of clinically significant evidence of liver abnormality including

hepatic transaminase values exceeding 3 times the upper limit of normal. Methimazole can cause fetal harm when administered

to a pregnant woman. Methimazole readily crosses the placental membranes and can induce goiter and even cretinism

in the developing fetus. In addition, rare instances of congenital defects: aplasia cutis, as manifested by scalp

defects; esophageal atresia with tracheoesophageal fistula; and choanal atresia with absent/ hypoplastic nipples,

have occurred in infants born to mothers who received methimazole during pregnancy. If methimazole is

used

during pregnancy or if the patient becomes pregnant while taking this drug, the patient should be warned of the

potential hazard to the fetus. Since the above congenital defects have been reported in offspring of patients treated

with methimazole, it may be appropriate to use other agents in pregnant women requiring treatment for hyperthyroidism.

Postpartum patients receiving methimazole should not nurse their babies.

PRECAUTIONS

General

Patients who receive methimazole should be under close surveillance and should be cautioned to report immediately

any evidence of illness, particularly sore throat, skin eruptions, fever, headache, or general malaise. In such

cases, white-blood cell and differential counts should be made to determine whether agranulocytosis has developed.

Particular care should be exercised with patients who are receiving additional drugs known to cause agranulocytosis

Laboratory Tests - Because methimazole may cause hypoprothrombinemia and bleeding, prothrombin time

should be monitored during therapy with the drug, especially before surgical procedures (see *General* under **PRECAUTIONS).**

Periodic monitoring of thyroid function is warranted, and the finding of an elevated TSH warrants a decrease in the

dosage of methimazole.

Drug Interactions

Anticoagulants (oral): The activity of oral anticoagulants may be potentiated by antivitamin- K activity attributed to methimazole.

b−*adrenergic blocking agents:*Hyperthyroidism may cause increased clearance of beta blockers with a high extraction

ratio. A dose reduction of betaadrenergic blockers may be needed when a hyperthyroid patient becomes euthyroid.

Digitalis glycosides: Serum digitalis levels may be increased when hyperthyroid patients on a stable digitalis

glycoside regimen become euthyroid; reduced dosage of digitalis glycosides may be required.

Theophylline:

Theophylline clearance may decrease when hyperthyroid patients on a stable theophylline regimen become euthyroid; a reduced

dose of theophylline may be needed.

Carcinogenesis, Mutagenesis, Impairment of Fertility

In a 2 year study, rats were given methimazole at doses of 0.5, 3, and 18 mg/kg/day. These doses were 0.3, 2, and 12

times the 15 mg/day maximum human maintenance dose (when calculated on the basis of surface area). Thyroid

hyperplasia, adenoma, and carcinoma developed in rats at the two higher doses. The clinical significance of these findings

is unclear.

Pregnancy

Pregnancy Category D - See **WARNINGS - Methimazole** used judiciously is an effective drug in hyperthyroidism complicated

by pregnancy. In many pregnant women, the thyroid dysfunction diminishes as the pregnancy proceeds; consequently,

a reduction in dosage may be possible. In some instances, use of methimazole can be discontinued 2 or 3

weeks before delivery.

Nursing Mothers

The drug appears in human breast milk and its use is contraindicated in nursing mothers (see **WARNINGS).**

Pediatric Use

See DOSAGE **AND ADMINISTRATION.**

ADVERSE REACTIONS

Major adverse reactions (which occur with much less frequency than the minor adverse reactions) include inhibition of myelopoiesis

(agranulocytosis, granulocytopenia, and thrombocytopenia), aplastic anemia, drug fever, a lupuslike syndrome,

insulin autoimmune syndrome (which can result in hypoglycemic coma), hepatitis (jaundice may persist for several

weeks after discontinuation of the drug), periarteritis, and hypoprothrombinemia. Nephritis occurs very rarely.

Minor adverse reactions include skin rash, urticaria, nausea, vomiting, epigastric distress, arthralgia, paresthesia,

loss of taste, abnormal loss of hair, myalgia, headache, pruritus, drowsiness, neuritis, edema, vertigo,

skin pigmentation, jaundice, sialadenopathy, and lymphadenopathy. It should be noted that about 10% of patients with untreated

hyperthyroidism have leukopenia (white-blood-cell count of less than 4,000/mm3), often with relative granulopenia.

OVERDOSAGE

Signs and Symptoms -

-

Symptoms may include nausea, vomiting, epigastric distress, headache, fever, joint pain, pruritus, and edema.

Aplastic anemia (pancytopenia) or agranulocytosis may be manifested in hours to days. Less frequent events are hepatitis,

nephrotic syndrome, exfoliative dermatitis, neuropathies, and CNS stimulation or depression. Although not

well studied, methimazoleinduced agranulocytosis is generally associated with doses of 40 mg or more in

patients older than 40 years of age.

No information is available on the median lethal dose of the drug or the concentration of methimazole in biologic fluids

associated with toxicity and/or death. *Treatment - To obtain up-todate* - To obtain up-todate information about the

treatment of overdose, a good resource is your certified Regional Poison Control Center. Telephone numbers of

certified poison control centers are listed in the *Physicians" Desk Reference (PDR). In managing overdosage,*

. In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and

unusual drug kinetics in your patient. Protect the patient"s airway and support ventilation and perfusion. Meticulously monitor

and maintain, within acceptable limits, the patient"s vital signs, blood gases, serum electrolytes, etc. The patient"s

bone marrow function should be monitored. Absorption of drugs from the gastrointestinal tract may be decreased by giving

activated charcoal, which, in many cases, is more effective than emesis or lavage; consider charcoal instead of or

in addition to gastric emptying. Repeated doses of charcoal over time may hasten elimination of some drugs that have

been absorbed. Safeguard the patient"s airway when employing gastric emptying or charcoal. Forced diuresis, peritoneal

dialysis, hemodialysis, or charcoal hemoperfusion have not been established as beneficial for an overdose of methimazole.

DOSAGE AND ADMINISTRATION

Methimazole is administered orally. Tablets are usually given in 3 equal doses at approximately 8-hour intervals.

Adult - The initial daily dosage

- The initial daily dosage is 15 mg for mild hyperthyroidism, 30 to 40 mg for moderately evere hyperthyroidism and 60 mg for severe

hyperthyroidism, divided into 3 doses at 8-hour intervals. The maintenance dosage is 5 to 5 mg daily.

Pediatric - Initially, the daily

- Initially, the daily dosage is 0.4 mg/kg of body weight divided into 3 doses and given at 8-hour intervals.

The maintenance dosage is approximately 1⁄2 of the initial dose.

HOW SUPPLIED

Methimazole Tablets are available in:

The 5 mg tablets are white, round, biconvex, beveled tablets, scored on one side and imprinted “E” over “205”

on the other. They are available as follows:

Blistercards of 30 tablets.

10 mg: White, round, biconvex, beveled tablets, scored on one side and debossed “E” over “210” on the other side and supplied as:

Blistercards of 30 tablets

Store at 20°-25°C (68°- 77°F)[see USP Controlled Room Temperature].

Dispense contents in a tight, light resistant container as defined in the USP with a child-resistant closure, as required.

KEEP THIS AND ALL MEDICATION OUT OF THE REACH OF CHILDREN.

REFERENCES

Sandoz Inc.

Princeton, NJ 08540

Rev. 03/06

OS7631

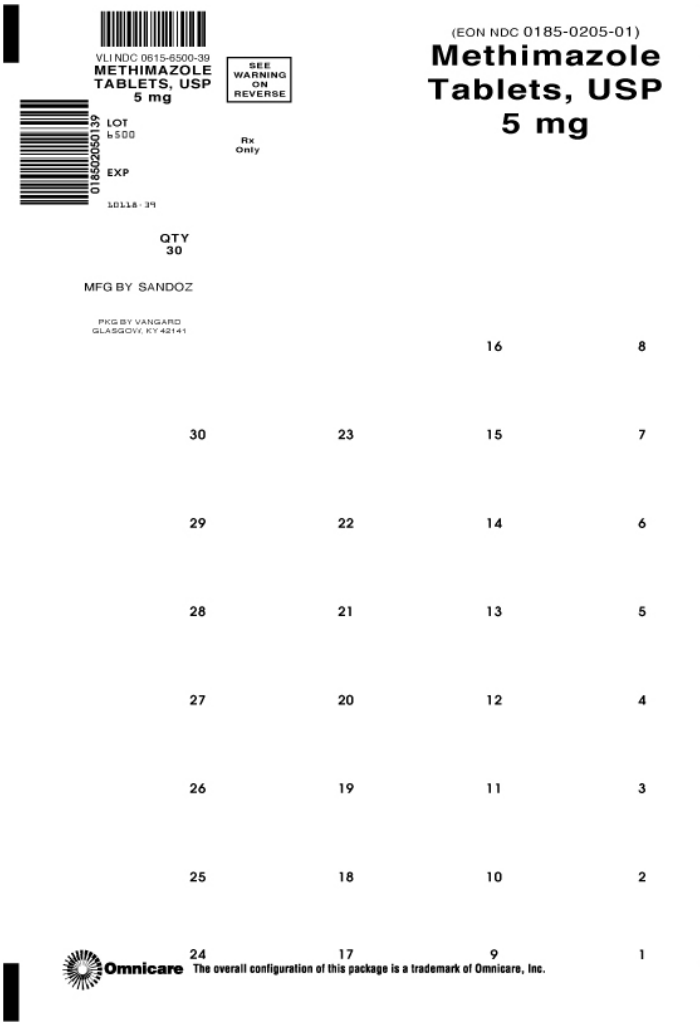
MF0205REV03/06

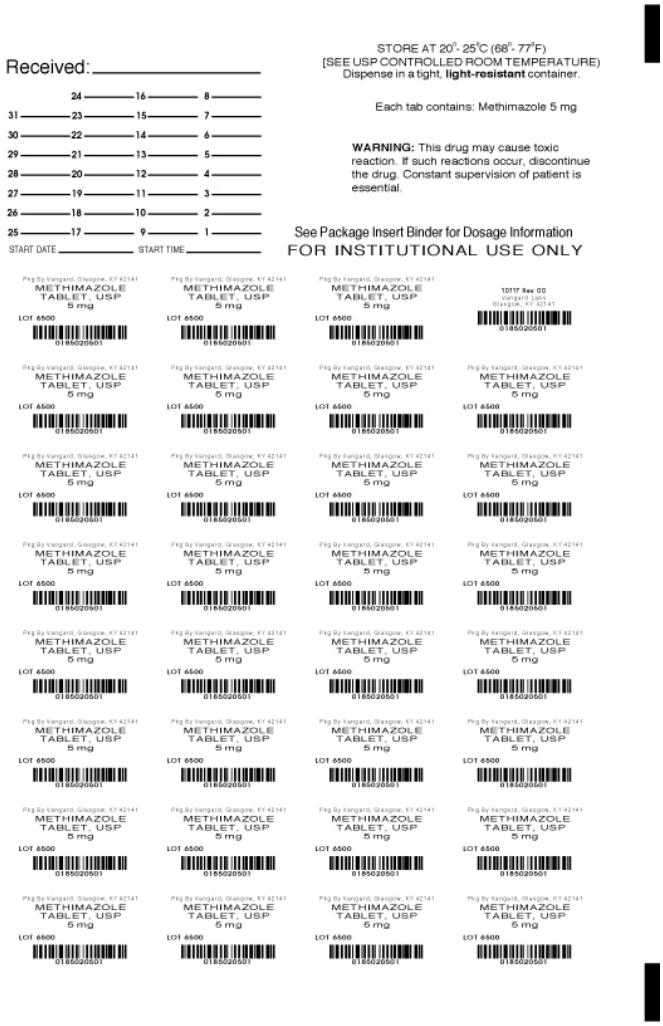
MG #16035

PRINCIPAL DISPLAY PANEL

Methimazole Tablets,

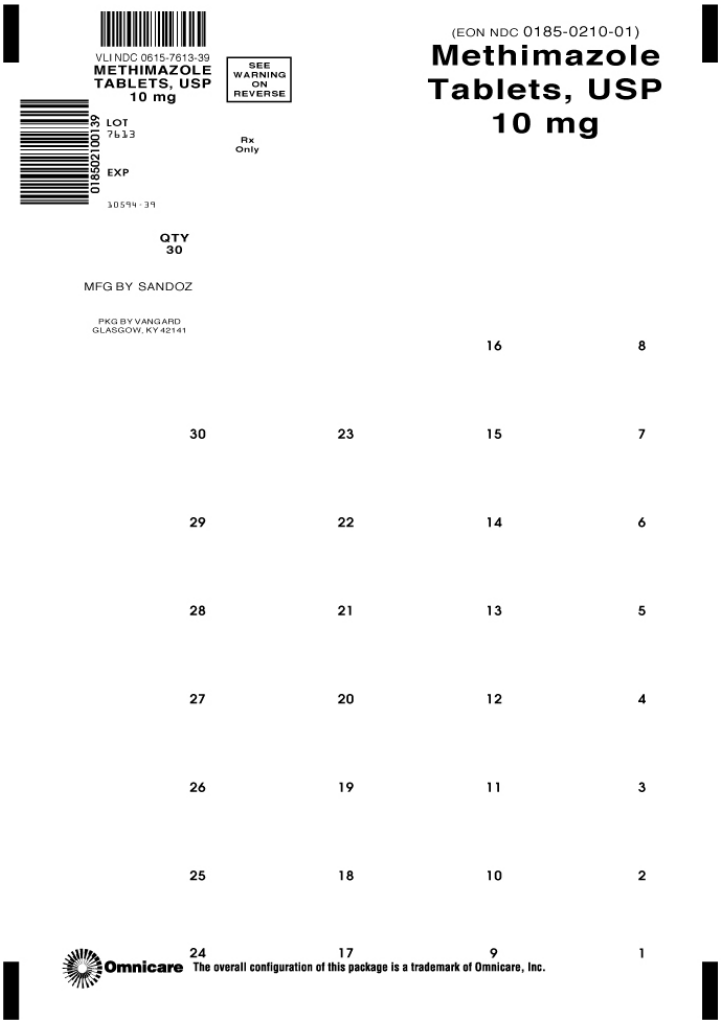
USP 5mg





PRINCIPAL DISPLAY PANEL

Methimazole Tablets, USP 10mg



METHIMAZOLE

methimazole tablet

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:0615-6500(NDC:0185-0205)
Route of Administration	ORAL		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
METHIMAZOLE (UNII: 554Z48XN5E) (METHIMAZOLE - UNII:554Z48XN5E)	METHIMAZOLE	5 mg

Inactive Ingredients	
Ingredient Name	**Strength**
LACTOSE MONOHYDRATE (UNII: EWQ57Q8I5X)	
ANHYDROUS LACTOSE (UNII: 3SY5LH9PMK)	
STARCH, CORN (UNII: O8232NY3SJ)	
TALC (UNII: 7SEV7J4R1U)	
SILICON DIOXIDE (UNII: ETJ7Z6XBU4)	

MAGNESIUM STEARATE (UNII: 70097M6I30)	

Product Characteristics			
Color	WHITE	**Score**	2 pieces
Shape	ROUND	**Size**	6mm
Flavor		**Imprint Code**	E;205
Contains			

Packaging				
#	**Item Code**	**Package Description**	**Marketing Start Date**	**Marketing End Date**
1	NDC:0615-6500-39	30 in 1 BLISTER PACK		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA040411	03/27/2001	

METHIMAZOLE

methimazole tablet

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:0615-7613(NDC:0185-0210)
Route of Administration	ORAL		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
METHIMAZOLE (UNII: 554Z48XN5E) (METHIMAZOLE - UNII:554Z48XN5E)	METHIMAZOLE	10 mg

Inactive Ingredients	
Ingredient Name	**Strength**
ANHYDROUS LACTOSE (UNII: 3SY5LH9PMK)	
COLLOIDAL SILICON DIOXIDE (UNII: ETJ7Z6XBU4)	
LACTOSE MONOHYDRATE (UNII: EWQ57Q8I5X)	
MAGNESIUM STEARATE (UNII: 70097M6I30)	
STARCH, PREGELATINIZED CORN (UNII: O8232NY3SJ)	
TALC (UNII: 7SEV7J4R1U)	

Product Characteristics			
Color	WHITE	**Score**	2 pieces
Shape	ROUND	**Size**	9mm

Flavor		**Imprint Code**	E;210
Contains			

Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:0615-7613-39	30 in 1 BLISTER PACK		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA040411	03/27/2001	

Labeler - NCS HealthCare of KY, Inc dba Vangard Labs (050052943)

Establishment

Name	Address	ID/FEI	Business Operations
NCS HealthCare of KY, Inc dba Vangard Labs		050052943	RELABEL, REPACK

Revised: 4/2011 NCS HealthCare of KY, Inc dba Vangard Labs